I hereby certify that this correspondence is being deposited with the U.S. Postal Service with sufficient postage as First Class Mail, in an envelope addressed to: MS Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA MAY 2 3 2005 22313-1450, on the date shown below. Dated: May 19, 2005

JC10 Rec'd PCT/PTO 2 3 MAY 2005

Docket No.: SLII-P01-002 (PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:

Confirmation No.: N/A

Hooft Van Huijsduijnen et al.

Application No.: 10/526,164

Art Unit: N/A

Filed: February 28, 2005

Examiner: Not Yet Assigned

PROTEIN TYROSINE PHOSPHATASE

INHIBITORS

INFORMATION DISCLOSURE STATEMENT (IDS)

MS Amendment Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Dear Sir:

Pursuant to 37 CFR 1.56, 1.97 and 1.98, the attention of the Patent and Trademark Office is hereby directed to the references listed on the attached PTO/SB/08. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the references be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

This Information Disclosure Statement is filed within three months of the U.S. filing date (37 CFR 1.97(b)(1)).

A copy of each reference on the PTO/SB/08 is attached.

In accordance with 37 CFR 1.97(g), the filing of this Information Disclosure Statement shall not be construed to mean that a search has been made or that no other material information as defined in 37 CFR 1.56(a) exists. In accordance with 37 CFR 1.97(h), the filing of this Information Disclosure statement shall not be construed to be an admission that any patent, publication or other information referred to therein is "prior art" for this invention unless specifically designated as such.

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Application No.: 10/526,164 Docket No.: SLII-P01-002

It is submitted that the Information Disclosure Statement is in compliance with 37 CFR 1.98 and the Examiner is respectfully requested to consider the listed references.

The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 18-1945, under Order No. SLII-P01-002. A duplicate copy of this paper is enclosed.

Dated: May 19, 2005

Respectfully/submitted,

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Sut	ostitute for form 1449A/B	/PTO		Complete if Known		
				Application Number	10/526,164	
11	NFORMATIC	N DIS	CLOSURE	Filing Date	February 28, 2005	
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				Art Unit	N/A	
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Sheet	1	of	4	Attorney Docket Number	SLII-P01-002	

	U.S. PATENT DOCUMENTS							
Examiner Initials*	Cite No.1	Document Number Number-Kind Code ² (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear			

	FOREIGN PATENT DOCUMENTS								
Examiner Initials*	Cite No.1	Foreign Patent Document Country Code ³ -Number ⁴ -Kind Code ⁵ (# known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T⁵			
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		NON PATENT LITERATURE DOCUMENTS	
Examiner Initials	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T²
	CA	ANDERSON et al., 2001, Structural and evolutionary relationships among protein tyrosine phosphatase domains, Mol. Cell. Biol. 21:7117-7136	
	СВ	ASANTE-APPIAH et al., 2001, The YRD motif is a major determinant of substrate and inhibitor specificity in T-cell protein-tyrosine phosphatase, J. Biol. Chem. 276:26036-26043	
	CC	BJORGE et al., 2000, Identification of Protein-tyrosine Phosphatase 1B as the Major Tyrosine Phosphatase Activity Capable of Dephosphorylating and Activating c-Src in Several Human Breast Cancer Cell Lines, J. Biol. Chem. 275(52):41439-41446	
	CD	BLASKOVICH et al., 2002, Recent discovery and development of protein tyrosine phosphatase inhibitors, Expert Opin. Ther. Patents, 12(6):871-905	
	CE	BLISKA et al., 1991, Tyrosine phosphate hydrolysis of host proteins by an essential Yersinia virulence determinant, Proc. Natl. Acad. Sci. USA 88:1187-1191	
	CF	BORDO and ARGOS, 1991, Suggestions for "Safe" Residue Substitutions in Site-directed Mutagenesis, J. Mol. Biol. 217:721-729	
	CG	BUCKLEY et al., 2002, Regulation of Insulin-Like Growth Factor Type I (IGF-I) Receptor Kinase Activity by Protein Tyrosine Phosphatase 1B (PTP-1B) and Enhanced IGF-I-Mediated Suppression of Apoptosis and Motility in PTP-1B-Deficient Fibroblasts, Mol. Cell. Biol. 22(7):1998-2010	
	СН	BURKE et al., 1996, Small Molecule Interactions with Protein-Tyrosine Phosphatase PTP1B and Their Use in Inhibitor Design, Biochem. 35:15989-15996	
	CI	COCHRAN, 2001, Protein-protein interfaces: mimics and inhibitors, Curr. Opin. in Chem. Biol 5:654-659	
	CJ	COCHRANE et al., 2000, Identification of Natural Ligands for SH2 Domains from a Phase Display cDNA library, J. Mol. Biol. 297:89-97	
	СК	COTE et al., 1998, Combination of gene targeting and substrate trapping to identify substrates of protein tyrosine phosphatases using PTP-PEST as a model, Biochemistry 37:13128-13137	

Examiner	Date	
Signature	Considered	·

PTO/SB/08a/b (08-03)

Approved for use through 07/31/2006, OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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INF	ORMATI	ON DISC	LOSURE	Filing Date	February 28, 2005	
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				Art Unit	N/A	
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Sheet	2	of	4	Attorney Docket Number	SLII-P01-002	

	L DATABASE EMBL Online, December 1, 2001, retrieved from EBI Database accession no.
	Q69575 XP002224616 Peptide comprising LLYGAFG abstract
C	M DENG et al., 2001, Identifying substrates for endothelium-specific Tie-2 receptor tyrosine
l	kinase from phage-displayed peptide libraries for high throughput screening, Comb Chem
1	High Throughput Screen 4:525-533
C	N DENTE et al., 1997, Modified phage peptide libraries as a tool to study specificity of
	phosphorylation and recognition of tyrosine containing peptides, J Mol Biol. 269:694-703
	O DEVINNEY et al., 2000, Phosphatases and kinases delivered to the host cell by bacterial
	pathogens, Trends in Microbiol. 8(1):29-33
	P DOUGHERTY, 2000, Unnatural amino acids as probes of protein structure and function, Curr.
	Opin. in Chem. Biol. 4:645-652
C	Q ELCHEBLY et al., 1999, Increased insulin sensitivity and obesity resistance in mice lacking the
l i	protein tyrosine phosphatase-1B gene, Science 283:1544-1548
C	R ESPANEL and SUDOL, 2001, Yes-associated Protein and p53-binding Protein-2 Interact
	through Their WW and SH3 Domains, J. Biol. Chem. 276(17):14514-14523
C	S ESPANEL et al., 2001, Pulling strings below the surface: hormone receptor signaling through
	inhibition of protein tyrosine phosphatases, Endocrine 15:19-28
[C	T FACHINGER et al., 1999, Functional interaction of vascular endothelial-protein-tyrosine
	phosphatase with the Angiopoietin receptor Tie-2, Oncogene 18:5948-5953
[U FELICI et al., 1991, Selection of Antibody Ligands from a Large Library of Oligopeptides
	Expressed on a Multivalent Exposition Vector, J. Mol. Biol. 222:301-310
0	V FLINT et al., 1997, Development of "substrate-trapping" mutants to identify physiological
	substrates of protein tyrosine phosphatases, Proc. Natl. Acad. Sci. USA 94:1680-1685
C	FRIDEN et al., 1993, Blood-Brain Barrier Penetration and in Vivo Activity of an NGF
	Conjugate, Science 259:373-377
0	X GARTON et al., 1996, Identification of p130 ^{cas} as a substrate for the cytosolic protein tyrosine
	phosphatase PTP-PEST, Mol. Cell. Biol. 16:6408-6418
0	Y GOLDSTEIN et al., 1998, Regulation of the insulin signalling pathway by cellular protein-
	tyrosine phosphatases, Mol. Cell. Biochem. 182:91-99
0	Z GOLEBIOWSKI et al., 2001, High-throughput organic syntheses of peptide mimetics," Curr.
	Opin. in Drug Disc. and Dev. 4(4):428-434
C	A1 GROVES et al., 1998, Structural Basis for Inhibition of the Protein Tyrosine Phosphatase 1B
	by Phosphotyrosine Peptide Mimetics, Biochem. 37:17773-17783
C	HIGASHI et al., 2002, SHP-2 Tyrosine Phosphatase as an Extracellular Target of Helicobacter
	pylori CagA Protein, Science 295:683-686
C	C1 HOOFT van HUIJSDUIJNEN, 1998, Protein tyrosine phosphatases: counting the trees in the
· · · -	forest, Gene 225:1-8
C	D1 HRUBY and BALSE, 2000, Conformational and Topographical Considerations in Designing
- 	Agonist Peptidomimetics from Peptide Leads, Curr. Med. Chem. 7:945-970
l C	HUYER et al., 1998, Affinity selection from peptide libraries to determine substrate specificity
	of protein tyrosine phosphatases, Anal. Biochem. 258:19-30
	F1 JAIN and MUNN, 2000, Leaky vessels? Call Ang1!, Nature Med. 6(2):131-132 G1 KIM and KAHN, 2000, A Merger of Rational Drug Design and Combinatorial Chemistry:
0	
l i	Development and Application of Peptide Secondary Structure Mimetics, Comb. Chem. & High
	Throughput Screen. 3:167-183 11 KLAMAN et al., 2000, Increased energy expenditure, decreased adiposity, and tissue-specific
i i ^c '	insulin sensitivity in protein-tyrosine phosphatase 1B-deficient mice, Mol. Cell. Biol 20:5479-
	100 100
 	I1 KOLE et al., 1996, A Peptide-based Protein-tyrosine Phosphatase Inhibitor Specifically
I '	Enhances Insulin Receptor Function in Intact Cells, J. Biol. Chem. 271(24):14302-14307
	Emiliances insum receptor i unction in mace delle, 3. Biol. Chem. 27 (24).14302-14307

Examiner	Date	
Signature	Considered	

PTO/SB/08a/b (08-03)

Approved for use through 07/31/2006. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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11	NFORMATION	I DI	SCLOSURE	Filing Date	February 28, 2005	
l s	TATEMENT E	3Y /	APPLICANT	First Named Inventor	Rob Hooft Van Huijsduijnen	
				Art Unit	N/A	
	(Use as many she	eets as	necessary)	Examiner Name	Not Yet Assigned	
Sheet	3	of	4	Attorney Docket Number	SLII-P01-002	

	CJ1	LANDER et al., 2001, Initial sequencing and analysis of the human genome, Nature 409:860- 921
· ·	CK1	LARSEN et al., 2002, Synthesis and biological activity of a novel class of small molecular
		weight peptidomimetic competitive inhibitors of protein tyrosine phosphatase 1B, J. Med.
		Chem. 45:598-622
	CL1	LINDGREN et al., 2000, Cell-penetrating peptides, TIPS 21:99-103
	CM1	MARCUS et al., 1996, Cytokine-induced increases in endothelial permeability occur after
	O	adhesion molecule expression, Surgery 120:411-417
F	CN1	MATOZAKI and KASUGA, 1996, Roles of Protein-Tyrosine Phosphatases in Growth Factor
1	0.11	Signalling, Cell. Signal. 8(1)13-19
	CO1	MURLI et al., 2001, Role of tyrosine kinases and the tyrosine phosphatase SptP in the
1	٠.	interaction of <i>Salmonella</i> with host cells, Cell. Microbiol. 3(12)795-810
F	CP1	MURPHY et al., 2000, Simplified amino acid alphabets for protein fold recognition and
	0, ,	implications for folding, Protein Eng. 13(3):149-152
	CQ1	MURTHY et al., 1999, Fusion Proteins Could Generate False Positives in Peptide Phage
	CQI	Display, BioTechniques 26(1):142-149
	CR1	NOGUCHI et al., 2001, Inhibition of Cell Growth an Spreading by Stomach Cancer-associated
j	CIVI	Protein-tyrosine Phosphatase-1 (SAP-1) through Dephosphorylation of p130 ^{cas,} J. Biol. Chem.
1		276(18):15216-15224
1	CS1	ODENBREIT et al., 2000, Translocation of <i>Helicobacter pylori</i> CagA into Gastric Epithelial
	CSI	Cells by Type IV Secretion," Science 287:1497-1500
	CT1	PATHAK and YI, 2001, Sodium Stibogluconate Is a Potent Inhibitor of Protein Tyrosine
	CH	Phosphatases and Augments Cytokine Response in Hemopoietic Cell Lines, J. Immunol.
		167:3391-3397
-	CU1	PELLEGRINI et al., 1998, Mapping the subsite preferences of protein tyrosine phosphatase
	CUI	PTP-1B using combinatorial chemistry approaches, Biochemistry 37(45):15598-15606
	CV1	RANNEY, 1999, Biomemetic Transport and Rational Drug Delivery, Biochem. Pharm. 59:105-
	CVI	114
	CW1	ROGOV and NEKRASOV, 2001, A numerical measure of amino acid residues similarity based
		on the analysis of their surroundings in natural protein sequences, Protein Eng. 14(7):459-463
	CX1	SALMEEN et al., 2000, Molecular Basis for the Dephosphorylation of the Activation Segment
1		of the Insulin Receptor by Protein Tyrosine Phosphatase 1B, Mol. Cell 6:1401-1412
	CY1	SARMIENTO et al., 2000, Structural Basis of Plasticity in Protein Tyrosine Phosphatase 1B
		Substrate Recognition, Biochem. 39:8171-8179
	CZ1	SCHMITZ et al., 1996, Catalytic specificity of phosphotyrosine kinases Blk, Lyn, c-Src and Syk
		as assessed by phage display, J. Mol. Biol. 260:664-677
	CA2	SCHWARZE and DOWDY, 2000, In vivo protein transduction: intracellular delivery of
		biologically active proteins, compounds and DNA, TIPS 21:45-48
	CB2	SEO et al., 1997, Overexpression of SAP-1, a Transmembrane-Type Protein Tyrosine
		Phosphatase, in Human Colorectal Cancers, Biochem. Biophys. Res. Comm. 231:705-711
	CC2	TERRY et al., 1997, Accessibility of peptides displayed on filamentous bacteriophage virions:
		susceptibility to proteinases, Biol. Chem. 378:523-530
	CD2	VENTER et al., 2001, The Sequence of the Human Genome, Science 291:1304-1351
	CE2	VETTER et al., 2000, Assessment of protein-tyrosine phosphatase 1B substrate specificity
		using 'inverse alanine scanning', J. Biol. Chem. 275-2265-2268
	CF2	WÄLCHLI et al., 2000, Identification of tyrosine phosphatases that dephosphorylate the insulin
		receptor. A brute force approach based on "substrate-trapping" mutants, J. Biol. Chem.
		275:9792-9796
	CG2	WANG et al., 2002, Screening combinatorial libraries by mass spectrometry. 2. Identification
		of optimal substrates of protein tyrosine phosphatase SHP-1, Biochemistry 41(19):6202-6210
		
Evaminer		l Date I

Examiner	 Date	
Signature	Considered	

PTO/SB/08a/b (08-03)

Approved for use through 07/31/2006. OMB 0651-0031

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	(Use as many sh	eets as	s necess ary)	Examiner Name	Not Yet Assigned	
Sheet	4	of	4	Attorney Docket Number	SLII-P01-002	

		WIENER et al., 1994, Overexpression of the tyrosine phosphatase PTP1B is associated with human ovarian carcinomas, Am. J. Obstet. Gynecol. 170:1177-1183	
		WU et al., 1997, Comparative kinetic analysis and substrate specificity of the tandem catalytic domains of the receptor-like protein-tyrosine phosphatase alpha, J. Biol. Chem. 272:6994-7002	
1		ZHANG et al., 1993, Substrate specificity of the protein tyrosine phosphatases, Proc. Natl. Acad. Sci. USA 90:4446-4450	
	CK2	ZHANG et al., 2000, Thermodynamic Study of Ligand Binding to Protein-tyrosine Phosphatase 1B and Its Substrate-trapping Mutants, J. Biol. Chem. 275(44):34205-34212	
1	CL2	ZHANG, 2001, Protein tyrosine phosphatases: prospects for therapeutics, Curr Opin Chem Biol. 5(4):416-23	

^{*}EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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